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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,099	04/13/2004	Thomas Aisenbrey	INT-03-006	4534
59874	7590	09/28/2006	EXAMINER	
DOUGLAS R. SCHNABEL 316 HART STREET ESSEXVILLE, MI 48732			LE, THAO X	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/823,099

Applicant(s)

AISENBREY ET AL.

Examiner

Thao X. Le

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/28/06 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 16-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 16-17 recite the limitation "said chip carrier" in line 3. There is insufficient antecedent basis for this limitation in the claim.

For the purpose of examination, the "chip carrier" is not being considered.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2814

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6518885 to Brady et al in view of US 6165386 to Endo et al.

Regarding claim 1, Brady discloses an integrated circuit (IC) device in fig. 3 comprising: an integrated circuit die 14, col. 4 line 12, fixably attached to a substrate 12, col. 3 line 48, having metal leads 22 or 24, col. 4 line 1, an encapsulating layer 25, col. 4 line 30, and an antenna structure 114, col. 4 line 65, onto said encapsulating layer 25, wherein said metal leads 114 are exposed by said encapsulating layer 25 and said antenna structure.

But, Brady does not disclose the IC device wherein the antenna comprising a conductive loaded, resin-based comprising conductive material in a base resin host.

However, Endo discloses an antenna 21, col. 36 line 1, comprising a conductive loaded, resin-based comprising conductive material in a base resin host, col. 6 lines 63-65. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the antenna material teaching of Endo to replace the antenna 114 of Brady, because it would have created a conductive paste to form an antenna-shaped for radio frequency identification medium, see abstract.

Regarding claims 2-4, Brady does not disclose the device wherein the ratio, by weight, of conductive materials to said resin host between about 0.20 and about 0.40, wherein conductive materials comprise metal powder, wherein the metal powder is nickel, copper, or silver.

However, Endo discloses an antenna 21 comprises wherein the ratio, by weight, of conductive materials to said resin host between about 0.20 and about 0.40, col. 6 lines 64-65, wherein conductive materials comprise metal powder, wherein the metal powder is nickel, copper, or silver, col. 5 line 60, for the same reason as discussed in claim 1.

Regarding claims 5-6, Brady does not disclose the device wherein said metal powder a non-conductive material with metal plating, wherein said metal nickel, copper, silver, or alloys thereof.

However, Endo discloses the metal powder comprises a non-conductive material with metal plating, col. 7 line 2, wherein said metal nickel, copper, silver, or alloys thereof, col. 5 line 60, for the same reason as discussed in claim 1.

Regarding claim 7-14, Brady does not disclose the device wherein metal powder comprises a diameter of between about 3 micron and about 12 micron, wherein materials comprise non-metal powder conductive, wherein said non-metal powder is carbon, graphite, or an amine-based material, wherein conductive materials comprise metal powder a combination of metal powder and non-metal powder, wherein materials comprise micron conductive fiber, wherein said micron conductive fiber is nickel plated carbon fiber, stainless steel fiber, copper fiber, silver fiber or combinations thereof.

However, Endo discloses the device wherein metal powder comprises a diameter of between about 3 micron and about 12 micron, col. 6 lines 7 and 10, wherein materials comprise non-metal powder conductive, wherein said non-metal powder is carbon, graphite, or an amine-based material, wherein conductive materials comprise metal powder a combination of metal powder and non-metal powder, col. 7 line 2, wherein materials comprise micron conductive fiber, wherein said micron conductive fiber is nickel plated carbon fiber, stainless steel fiber, copper fiber, silver fiber or combinations thereof, col. 34 line 27, for the same reason as discussed in claim 1.

Regarding claims 15-17, Brady discloses the device wherein antenna structure 114 is electrically connected to integrated circuit die 14 (inherently the antenna is connected to the chip), fig. 3, wherein electrical connection by direct contact between said antenna 114 and metal interconnects 22/24 on a substrate 12, wherein electrical connection is by direct contact between said antenna and external leads 22/24, fig. 3.

Regarding claim 18, Brady discloses the device said encapsulating layer 25 comprises a resin-based material, col. 5 line 59.

7. Claims 1 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6200829 to Miller et al in view of US 6165386 to Endo et al.

Regarding claim 1, Miller discloses an integrated circuit (IC) device in fig. 1 comprising: an integrated circuit die 16, col. 3 line 21, fixably attached to a substrate 72, col. 3 line 22, having metal leads 18, col. 3 line 25, an encapsulating layer 60, col. 2 line 53, and an antenna structure 14, col. 2 line 45, onto said encapsulating layer 60, wherein said metal leads 18 are exposed by said encapsulating layer 60 and said antenna structure 14.

But, Miller does not disclose the IC device wherein the antenna 14 comprising a conductive loaded, resin-based comprising conductive material in a base resin host.

However, Endo discloses an antenna 21, col. 36 line 1, comprising a conductive loaded, resin-based comprising conductive material in a base resin host, col. 6 lines 63-65. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the antenna material teaching of Endo to replace the antenna 14 of Miller, because it would have created a conductive paste to form an antenna-shaped for radio frequency identification medium, see abstract.

Regarding claim 19, Miller discloses the device wherein the electrically contact through an opening 28, col. 3 line 45, in encapsulating layer 60.

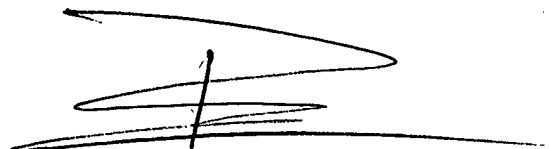
***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao X. Le whose telephone number is (571) 272-1708. The examiner can normally be reached on M-F from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on (571) 272 -1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

25 Sept. 2006

A handwritten signature in black ink, consisting of several fluid, overlapping strokes that form a stylized representation of the name Thao X. Le.

THAO X. LE  
PRIMARY PATENT EXAMINER